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ABSTRACT

A series of facts about current environmental problems are presented. Many countries observe the need to make provisions in constitutions and laws concerning the protection or preservation of the environment. International meetings have been held during recent decades in order to manage this problem. The booklet notes that environmental awareness and ecological literacy are a necessity. Purpose and content for environmental education and peace are discussed and illustrated, with an emphasis on the close relationship between ecological balance and peace. Contains 26 references. (BT)

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EDUCATION FOR ENVIRONMENT AND PEACE

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EDUCATION FOR ENVIRONMENT AND PEACE

Surya Nath Prasad

Dr. Surya Nath Prasad, Chandrapur, India, President of IAEWP (International Association of Educators for World Peace), discusses in this text education for environment and peace. A series of facts about present environmental problems are presented, and it is demonstrated how many countries have felt a need to make provisions in constitutions and laws about the protection or preservation of the environment, and how a number of international meetings have tried to deal with this problem area during recent decades. It is obvious that environmental awareness is now a necessity for all; ecological literacy is a must. Against this background aims and contents of an education for environment and peace are discussed and illustrated, and the author emphasizes the close relationship between ecological balance and peace.

EDUCATION FOR ENVIRONMENT AND PEACE

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"The ocean is your girdle, your bosom the mountains, goddess Earth
my obeisance to you. Forgive me for daring to touch you with my feet."

Poets in India had paid their tributes to Mother Earth several hundred years ago.

1. Facts about Environmental Problems

But today the degradation of the global environment has increased. And it is due to human population growth, tropical deforestation and rapid loss of biological diversity and global atmospheric change including stratospheric ozone loss and greenhouse warming.

Markham (1994), in his *A Brief History of Pollution* describes specific situations about the world of pollution from pre-history to post-industrial age, such as lead poisoning in Rome, water pollution in Mesopotamia and eight hundred years of soiling of air, water and land in London, as well as more contemporary concerns, like the hole in the ozone layer, acid rain, radioactivity and contaminated drinking water supplies.

Brevik, Chief of Information and Public affairs in UNEP also provides the various serious environmental problems and their impact on human beings, viz.:

Degradation of drylands continues to be an urgent global problem, placing some one billion people in 110 countries at risk, mainly in developing regions.

The world's forests and wooded land have shown a decline of some two percent. Worldwide habitat loss and fragmentation and the lack of biological corridors have led to the continuous decline in biological diversity.

Some 1,700 million people, more than one third of the world's population, are without a supply of safe water. An estimated one quarter of the world's population will suffer from chronic water shortages in the beginning of the next century.

One third of the world's coastal regions are at high risk of degradation, particularly from land-based activities.

Acid rain and transboundary air pollution, once considered a problem only in Europe and part of North America, are now increasingly apparent in parts of Asia and the Pacific and Latin America. All major cities in the world suffer urban air quality problems.

Despite coordinated action worldwide, damage to the ozone layer continues faster than expected, with the next ten years predicted to be the most vulnerable.

The rapidly rising demand for energy to fuel economic development will aggravate these problems, particularly in Asia and Pacific, where a 100 percent increase in energy use is predicted for the period 1990–2010 and in Latin America, with a predicted energy growth of 50–77 percent for the same period.

The polar regions, representing the largest remaining natural ecosystems on Earth are also coming under increasing stress, particularly from long-range pollutant transport and deposition. (Brevik, 1997, p. 17A.)

"Adult human beings carry at least 500 measurable chemicals in their bodies that were never in anybody before the 1920s", says Colborn (1997, p. 7), Director of the Wildlife and Contaminants Programme of World Wildlife Fund (WWF). Wargo's (1996) new book: *Our Children's Toxic Legacy* says that of the 325 pesticides that are legally allowed to remain as residues in food, one-third are suspected of causing cancer. One-third are known to disrupt the nervous system. A study by Brandon and Hommann (1996, p. 38) of the World Bank calculates that over 40,000 persons die early annually because of air pollution in India. According to the Survey of 239 cities by the National Resource Defence Council (1996, p. 5) in the United States tiny particles of airborn pollution cause 64,000 deaths

nationwide every year. Worldwide, millions of lives are at stake due to bacteriologically and chemically contaminated air, water and food.

Though environmental problems are local in origin, they have effects that transcend national borders. Former United States President Jimmy Carter also asserts in his environmental message to the United States Congress in 1977, "Environmental problems do not stop at national boundaries. In the past decade, we and other nations have come to recognize the urgency of international efforts to protect our common environment". Thus pollution has no national boundaries. All these environmental problems are the great challenge to the survival of mankind on this planet earth. This is the reason *Global 2000 Reports* predicts

"If the present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically and more vulnerable to disruption than the world we live in now. Serious stresses involving population, resources, and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today.

For hundreds of millions of the desperately poor, the outlook for food and other necessities of life will be no better. For many it will be worse. Barring revolutionary advances in technology, life for most people on earth will be more precarious in 2000 than it is now—unless the nations of the world act decisively to alter current trends." (Barney, 1986, p. 368.)

This is why the most famous Cousteau (1997) also forecasted the destruction of the planet sometime in the next 100 years. "Our survival is not more than a question of 25, 50 or perhaps 100 years", he warned.

In fact, a world is peaceful only when it is free from all types of pollution, poverty, disease, and injustice.

2. Constitutional and Legal Protection of the Environment

Visualising the danger for mankind from the degradation of the environment, feeling urgent need of knowledge about food, air, water and wildlife, and thinking for the benefit of human beings from the protection of nature; the leaders of the different nations of the world have made

provisions in their countries' *constitutions* about the protection and preservation of the environment.

The Constitution of *Albania* states that the protection of the environment and natural riches is a duty of the state.

The Constitution of *Bulgaria* provides that "the State bodies and enterprises, the cooperatives and public organizations are duly bound to protect and preserve nature and natural resources, the water, air and soil, as well as the cultural monuments".

Article 11 of the Constitution of *China* of 5 March 1978 provides that "the state protects the environment and natural resources and prevents and eliminates pollution and other hazards to the public."

Article 15 of the Constitution of the former *Czechoslovakia* provides that "the State shall make provision for conservation of nature and the preservation of the beauties of the country so as to create an increasingly rich source of benefit to the people and suitable surroundings for the working people with a view to their health and their right to recreation".

In *France,* a bill introduced in 1978 states, "Everyone has the right to a balanced and healthy environment and has the duty to defend it so as to ensure the quality of life of present and future generations. The State shall protect nature and the ecological equilibrium and shall take steps to ensure the rational use of natural resources".

The Constitution of the former *German Democratic Republic* entrusts the State and Society with the care for the protection of nature in the interests of the well-being of its citizens. The constitution lays down that the competent bodies shall insure the purity of the water and the air, and protection for flora and fauna and the natural beauties of the homeland.

Article 24 of the 1975 Constitution of *Greece* states that the protection of the natural and cultural environment constitutes a duty of the state. The state is bound to adopt special protective or prohibitive measures for the preservation of the environment.

Hungary considers the protection of the human environment as an element of the right to the protection of the life, corporal integrity and health of its citizens, a right which is implemented in part by the aforementioned protection of the human environment.

Article 48-A of the *Indian* Constitution of 26 January 1950 provides protection and improvement of the environment and safegarding of forests and wildlife. "The State shall endeavour to protect and improve

the environment and to safeguard the forests and wildlife of the country."

Article 13 of the Constitution of *Japan* also states that all of the people shall be respected as individuals and their right to life, liberty and the pursuit of happiness shall be the supreme consideration of the organs of State.

Article 123 of the *Peruvian* Constitution of 12 July 1979 provides that "Everyone has the right to live in a healthy environment, ecologically balanced and adequate for the development of life and preservation of the countryside and nature. Everyone has the duty to conserve the environment."

The 1976 version of the Constitution of *Poland* provides that the State shall "ensure the protection and proper shaping of the natural environment, which is an all national asset." It also recognizes the right of the citizens of the republic to "benefit from the natural environment and their duty to protect it".

Article 66 of the *Portuguese* Constitution of 2 April 1976 has a similar provision, to the effect that "everyone shall have a healthy and ecologically balanced human environment and the duty to defend it".

Article 42 of the Constitution of the former *Union of Soviet Socialist Republics* ensures the citizens that the State will protect their health and improve the environment. But Article 67 of the Constitution of this State provides that "the citizens of the USSR are obliged to protect nature and conserve its riches".

Article 45 of the *Spanish* Constitution of 29 December 1978 states, "Everyone has the right to enjoy an environment suitable for development of the person as well as the duty to preserve it. The public authorities shall concern themselves with the rational use of all natural resources for the purpose of protecting and improving the quality of life and protecting and restoring the environment, supporting themselves on an indispensable collective solidarity. For those who violate the provisions of the foregoing paragraphs, penal or administrative sanctions, as applicable, shall be established and they shall be obliged to repair the damage caused."

Article 27-14 of the new Constitution of *Sri Lanka* of 13 August 1978 lays down that the State shall protect, preserve and improve the environment for the benefit of the community.

Article 24.7 of the *Swiss* Constitution entrusts the State to protect man and his natural environment from damage or harm.

In the *United States*, the Constitution of *Illinois* contains an article providing for the right of every person to a healthy environment. *Rhode Island* guarantees the right to use and enjoy the natural resources of the state and puts its citizens under a duty to preserve their value. The Constitution of *Pennsylvania* recognises a right to pure air, clean water and the preservation of natural historical and aesthetic values of the environment.

In 1974, Article 192 of the Constitution of *Yugoslavia* recognized the human right to a healthy environment.

In the Constitutions of *Austria, Belgium, France, Federal Republic of Germany, Italy and the Netherlands*; the right to health, life or corporal integrity are used to protect these assets from harm caused by the pollution of the environment.

Besides the constitutional protection of the environment, there are certain *national laws* on environmental protection.

The *Canadian federate State of Ontario*, the *Australian State of Victoria* and *Papua New Guinea* refer in their general environmental laws to man's health and well-being.

In *Colombia*, the 1973 "National Code for renewable natural resources and environmental protection" states as its objective "the protection, conservation and restoration of the environment and renewable natural resources, the health and well-being of the people".

Denmark, Sweden and the *United States* also have general laws on environmental protection, in which references to human health and well-being are to be found in the definition of objectives.

The *French* Law of 10 July 1976 is related to the protection of nature. "It is in the public interest to protect natural spaces and scenery, to preserve animal and plant species, to maintain biological equilibria and to protect natural resources from degradation threatening them. Everyone has a duty to safeguard the natural heritage in which he lives".

The general law of 1972 of *Japan* on nature conservation states that "given the fact that the natural environment is indispensable for man's health and cultural well-being, its conservation must be ensured in such a way as to enable future generations to inherit it". Japan's general law on Pollution Control of 1971 to 1974 refers to the preservation of the healthy life of the nation.

The aim of *Switzerland's* legislation on the protection of the envi-

ronment is "to protect men, animals and plants, their communal existence and their habitats from harm and to maintain the fertility of the soil".

The advanced Treatment Plants being established in *Istanbul (Turkey)* today by Istanbul Water and Sewerage Administration ISKI General Directorate Istanbul, Turkey provide the answer to the problem of sewage contaminating their rivers, lakes, seas and groundwater by removing the harmful pollutants from sewage. These plants represent the responsibility felt by them all towards the national world in which they live.

Other States of the world also have similar laws for the protection of the environment and preservation of natural resources.

3. Recognition of Environmental Degradation by Environmental Meetings

The International Meetings on the various topics related to the environment were held in different nations of the world which recognized the degradation of environment throughout the world. These International Assemblies resolved certain recommendations to safeguard nature, and to preserve and protect the environment.

The Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere held in Paris *(France)* in September 1968 had adopted recommentation no. 17:

The General conference,
Being informed that the Economic and Social Council of the United Nations at its forty-fifth session approved a resolution on the question of convening an International Conference on the problems of the human environment, on which the United Nations General Assembly is going to decide,
Recommends that in its deliberations, the United Nations General Assembly might:
1. Take into consideration the recommendations of the conference on the biosphere.
2. Consider the advisability of a Universal Declaration on the Protection and Betterment of the Human Environment.

On 3 December 1968, the United Nations General Assembly did in fact re-echo the terms of ECOSOC resolution referred to by the UNESCO

conference and adopted the following resolution:

Concerned about the consequent effects on the conditions of man, his physical, mental and social well-being, his dignity and his enjoyment of basic human rights... *Convinced* that increased attention to the problems of the human environment is essential for sound economic and social development... *Decides* to convene a conference on the Human Environment.

This resolution was taken up again in 1969 and was finally put into effect with United Nations Conference on the Human Environment, held in *Stockholm* in 1972, which has led to the Creation of the United Nations Environment Programme (UNEP).

The European Conservation Conference, held in *Strasbourg* in 1970, proposed, in its final declaration, that the Council of Europe be charged to draw up a protocol to the European Convention on Human Rights guaranteeing the right of every individual to enjoy a healthy and unspoiled environment. This protocol should cover the rights to air and water reasonably free from pollution, freedom from undue noise and other nuisances, and reasonable access to coast and country-side.

In 1972 the Council's Consultative Assembly adopted recommendation 683, by which it proposed, among other things,

to consider in the light of the conclusions reached at the United Nations Conference in Stockholm and the Council of Europe Conference in Vienna on the Environment whether the right to an adequate environment should be raised to the level of a human right and devise an appropriate legal instrument to protect this new right.

In March 1973, at the Second European Ministerial Conference on the Environment, the Home Affairs Minister of the Federal Republic of Germany put forward a draft recommending that an additional protocol be appended to the European Convention for the Protection of Human Rights, to establish the right to a healthy and balanced environment.

In 1978, the Parliamentary Assembly adopted recommendation 829 aimed at widening the scope of the European Convention on Human Rights to include civil, political and social rights. The right to the environment belongs to a group of social and economic rights.

The Geneva Convention of 10 June 1977 or the 1977 Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques prohibits environmental destruction that would be likely to harm populations.

The United Nations Conference on Environment and Development, having met at *Rio de Janeiro* from 3 to 14 June 1992, reaffirming the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June, 1972, and seeking to build upon it, with the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among states, key sectors of societies and people, working towards international agreements with respect of everyone and protect the integrity of the global environmental and developmental system, recognizing the integral and interdependent nature of the Earth, our home, proclaims, *inter alia*, that "Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature."

The Year 1997 is important in the sense that this is the 25th anniversary of the United Nations Environment Programme (UNEP) and also the Stockholm Declaration of the United Nations Conference on Human Environment, 10th anniversary of the Montreal protocol for the preservation of the ozone layer and 5th anniversary of the Earth Summit in Brazil. This is a meaningful year bcause in June 1997, the Summit of Eight European Allies met at *Denver* where they agreed to the 15 percent reduction in emissions by 2010. In the Summit, French President Jacques Chirac described the United States as "one of the world's biggest polluters", adding, "On a per capita basis, each American is responsible for three times more (emission of CFCS) than each Frenchman."

The UN Earth Summit was held in *New York* 23–27 June 1997 to assess progress on sustainable development since the 1992 Summit. The Earth Summit R5 aims to review action taken in the five years since the United Nations Conference on Environment and Development met in Rio de Janeiro, and to set priorities into the 21st century. Important steps forward have been taken on international cooperation to conserve and protect freshwater supplies, encourage greater energy efficiency and ensure better management of oceans and coastal areas.

The United Nations Environment Programme (UNEP) designated

Korea as the host country to celebrate the 25 anniversary of *"World Environment Day"* on 5th June 1997 on the theme "For Life on Earth". It focused on the survival of all species and ecosystems which help sustain life on Earth. It also recognized that all life forms must co-exist in harmony, as symbolized on the emblem. *Seoul Declaration on Environmental Ethics* was pronounced to heighten awareness of the importance of the environment and of the need for global cooperation and shared responsibility. Besides these international meetings on the environment, many treaties and international regional agreements refer to the environment and stress the need to protect it in order to protect man.

4. Education for Environment and Peace

The concept of education for environment and peace would be easy to understand when we know the meaning of these different words viz., education, environment and peace separately including the concept of man to whom these have great meaning and importance and are essential for his survival on this planet earth.

Human beings must know what man and the environment are and what the relation is between man and the environment. And the knowledge about man and the environment enables them to keep their environment safe and healthy for the own survival or peace. Peace for mankind is secured by the prosperity of all men which assures safe environment and guarantees sustainable peace provided they are persistently aware towards the environment.

Thus environment is the base of peace. And universal prosperity with perpetual awareness towards nature is the foundation of a healthy environment which leads to sustainable peace. Therefore, we should create a Culture of Environment for constructing a Culture of Peace.

(a) Education: Education is the unfoldment of all the elements already involved in man. This means education is nothing but a manifestation of all those things which are present in man. But the question arises what are those things which are present in man which need to be unfolded or evolved. In other words; what is man?

(b) Man: Man is a miniature universe. "Now we can define man", says Lederberg (1963), "Genotypically at least, he is six feet of a particular molecular sequence of carbon, hydrogen, oxygen, nitrogen and phosphorus atoms."

(c) Environment: Environment, Ecology and Biosphere are the same concepts. The idea of a biosphere (sphere of life) was first suggested by the Austrian geologist Suess (1995, p. 126) nearly a century ago. It was at that time an insignificant concept. Today, however, the biosphere has become the most important problem faced by man.

The distinguishing feature of the biosphere is that is supports life. It is estimated that the biosphere contains more than three hundred and fifty thousand species of plants including algae, fungi, mosses and higher forms of plants, and eleven million animal species ranging from uni-cellular protozoa to man. The biosphere supplies the essential requisites of life for all these species, namely light, heat, water, food and living space or habitats. Thus, the air, the water, man, animals, plants and planktons, the soil and bacteria which are all invisibly linterlinked in a life-sustaining system can be called the environment.

Morgan (1996, p. 16) believes that the human species is aware for the first time that it possesses a common body, this planet of ours, which we discovered like a child that sees itself in the mirror and discovers its identity. The earth includes all creatures upon it that have survived by adjusting themselves to the environment and attuning their lives to its rhythm. It is, therefore, absolutely necessary that these cycles should be maintained unimpaired. The human species is also aware that it is indivisible, that means, we are indivisible, because it is not possible to draw boundaries that would protect us as an island unto ourselves. It is also for the first time that threats to other animal species bring home to us the fragility of our own existence.

Thus, the environment is an evolutionary system. It represents a stable equilibrium of various physical and biological factors. The organic continuity of the system rests on a delicate network of interdependent relations between plant species and animal species including man. This is why Peet in his book *Radical Geography* gives a lesson for humanity:

Practice mutual aid! That is the surest means of giving to each and all the

greatest safety, the best guarantee of existence and progress, bodily, intellectually, and morally! That is what nature teaches us; and that is what all those animals which have attained the highest position in their respective classes have done." (Peet, 1976, p. 244.)

(d) Peace: Justice is the mother of peace, and altruism is peace. To do justice to everybody including animals and plants is the foundation of peace. And to serve our fellow human beings and also to preserve and protect animals and plants is peace.

Therefore, we should be helpful to each other in fulfilling our basic needs while maintaining our ecological balance. The sure result is peace. But if anybody's fulfilment of basic needs is threatened and his ecological balance is disturbed, the ultimate result would be violence.

Peace researchers Galtung and Wirak (1986, p. 61) have given the meaning of the concepts of peace like this:

Human needs	*When the fulfilment of basic needs is threatened*	*When the basic needs are fulfilled*
Life	Violence	Security
1. Food, Water 2. Clothing 3. Housing 4. Health 5. Education 6. Social Contact	Poverty	Well-being
7. Work 8. Liberty 9. Politics	Suppression	Freedom
10. New experience 11. Self realization 12. Meaningful life	Alienation	Identity
Ecology	Ecological imbalance	Ecological balance

(e) Environment and Peace: Environment and peace are correlated in the sense that peace is the product, it is the outcome or result of harmonious or balanced relationships and actions of human beings among themselves, and with other animals and plant species existing on this planet earth. It means that interdependence is the solid basis for a lasting peace.

"The ecology approach gives us a general formula—very general—for peace, and not only in the world, but also inside society, inside the person, and in nature under the headings 'development', 'personal growth', and 'ecological balance' respectively," says Galtung (1986, p. 255) in his paper entitled: "Peace Theory: An Introduction". According to Galtung as described by him in figure 3 in his same article, this is a peace theory molecule. That also picks up the ideas of interdependence (symbiosis) and balance of exchange (equity), at the same time rejecting the idea of convergence in diversity.

There is a great link between ecology and peace. And it is seen in the policy of the Green Party of the Federal Republic of Germany (Nida-Rümelin, 1986, pp. 394–399). The Green Party has definite policies in the fields of urban ecology, better residential conditions and saving ecologically valuable areas. The basic attitude of the Green Party towards a policy of peace is a radical pacifist one, opposed not only to nuclear weapons in the East and the West, but also to chemical, biological, and conventional armaments. There are also quite pragmatic concepts of defence policy, which outline stages of transition to the goal of a peaceful ecological world society.

Thus the natural ecology or the healthy environment or the pure biosphere is the basis of peace. This is why Director-General of UNESCO Frederico Mayor said on the occasion of the International Conference on Biosphere Reserves at Seville on 20 March 1995, that Man and the Biosphere programme, and Biosphere Reserves provide modern society with the conceptual and technical infrastructure to develop the culture of nature, which is the condition *sine qua non* for the construction of the culture of peace to which we all aspire.

(f) Environmental Education and Peace Education—What? Education for environment and peace is a discipline which studies man in relation with other animal species and species of plants and their

interdependence. The concept of environmental education has the concept of peace, and similarly the concept of peace education contains also, *inter alia,* the concept of ecology or biosphere or environment in its study. We have just become aware about the meaning of education, man, environment and relationship between man and environment, and peace. In other words, it is the study of different constituents of which man is made which are also present in the universe, and their preservation in nature along with other animals and plans, and also their necessity to man. Thus awareness about man and environment, and his action as per the knowledge about them for preserving nature is peace.

Thus, the natural resources of our planet—soil, forests, fresh waters, the seas—are the base of all agriculture and industry, and if we sustain that base, we can sustain development that leads to peace or it is peace itself. And the knowledge and information about all these natural reserves and our action to preserve these natural resources and to prevent them from destruction that ultimately leading to peace is Education for Environment and Peace. In short, environmental education is itself peace education, or we may say peace education is environmental education.

5. Environmental Education and Peace Education in Action

(a) Environmental Programmes in Educational Institutions: Apart from theoretical courses on environmental education from school through university to out-of-campus education, some practical education concerning environment should be encouraged. *A Nation at School: China Today* (Wenming, 1983, p. 15) advised that teachers remind children out playing in the garden to observe the natural scenery, and to note each tree and each blade of grass. As a result, they not only knew the names of the trees in the garden, they could also tell you when each bloomed and when it bore fruit.

Indoors, they may set up their own "nature corners", usually a sunny part of the classroom. One class may plant flowers, another may be raising goldfish of a variety of colours and yet another turtles. Still another class is raising silkworms. Teachers may say that the reason for setting up the "nature corners" is to include in young people a love for nature while at the same time training the powers of observation.

(b) Plans for Awareness Towards the Environment: The United Nations Environment Programme (UNEP) would like to encourage everyone to undertake various activities to raise public awareness towards the environment. The agenda is (i) to give a human face to environmental issues by linking specific problems to the survival of species; (ii) to empower people to become active agents of sustainable and equitable development; (iii) to promote an understanding that communities are pivotal to changing attitudes towards environmental issues; (iv) to reinforce the need for a better understanding of global environmental issues and environmental education; and (v) to advocate partnerships which will ensure that all nations and people enjoy a more prosperous future to sustain peace. (UNEP, 1992, p. 221.)

(c) Activities for Environmental Education: Green Cross Bolivia (a branch of Green Cross International—GCI) was officially launched in Kyoto, Japan in 1993 by its President Mikhail Gorbachev. It has used Bolivian Army Radio to broadcast nationwide all kinds of practical information and ideas on environmental issues. The FACT information network of Green Cross International enables teachers all over Russia who are concerned about the environment to have e-mail access to an education resource centre in Moscow. In Argentina a school specializing in environmental questions offers a three year training programme, held after school hours and during Summer holidays, to students aged 18–25. Green Cross International has also opened an Internet forum called Green Cross Roads which is currrently focussing on international trade and sustainable development (Bequette, 1996, p. 45).

(d) Floating University for Environmental Studies in the Marine Sciences: 'Floating University' was launched in 1990–91 by UNESCO following the initiative of several European Universities to achieve more effective training of young students and scientists through their participation in advanced multi-disciplinary reserach projects in the marine sciences field.

During the period 1991–94, over five hundred students from twenty-one countries in Europe, Africa, Latin America and the Arab region received advanced training through the 'Floating University' project. Some sixty professors and senior researchers from over forty institutions

in these regions were involved in research and on the job training including the computer-based learning modules and the application of coastal and marine image data from satellite and other sensors. (Annual Report of the Floating University Facility, 1994.)

(e) Notable Literature in Environmental Education: As part of the UNESCO-United Nations Environment Programme (UNEP), several sets of curriculum guides are being developed for different regions and published by UNESCO in the *Environmental Education Series*. In 1994, four guides (Reports 36–39) for the *Caribbean* focused on pre-service teacher education (two reports), primary and lower secondary grades, and upper secondary grades. A somewhat similar set of curriculum guides (Reports 40–43) has been produced for use in the Association of South-East Asian Nations (*ASEAN*) region, including guides for preservice training of primary and secondary school teachers and curriculum suggestions for primary and secondary schools (Environmental Education Series, 1994). Classroom materials are also being prepared for the *Arab States* and *Africa*.

Biological Diversity, Global Change and Freshwater Resources are topics addressed in three Environmental Education Modules, published in 1995 within the UNESCO-UNEP International Environmental Education Programme.

The 152-page module on *Biological Diversity* (authored by Peyton, Campa, Winterstein, Peyton & Peyton, 1995) is organized in three main sections. Section 1 introduces biodiversity and related biodiversity education to environmental education. Section 2 presents an academic framework for understanding biodiversity problems and issues, taking up such dimensions of biodiversity as distribution in space and time, importance, threats, management, development implications. In Section 3, various approaches and frameworks are presented for infusing biodiversity into educational programmes in various subject areas, using specific examples to illustrate how the infusion of the topic might be achieved, and recommending uses of the module to develop curriculum materials and to train educators.

The module on *Global Change* (compiled and written by Knapp, Volk and Hungerford, 1995) focuses on issues associated with global change and opportunities which are available to the educational community for

dealing with these issues in the secondary school. There are four main parts in the 149-page module. Part I deals with the complexity of global change, guidelines for the curriculum developer and how global change fits into a school curriculum. Part II focuses on the content of global change, including global warming, deforestation, population, energy consumption and land-use management, as well as presenting exemplary vignettes on what is termed the 'fallacy of separatism'. In Part III, strategies for involving learners take up such topics as responsible environmental behaviour, traditional thinking versus research findings and instructional options for dealing with global change issues. Part IV deals with the challenge of infusing global change instruction into the secondary school curriculum, including guidelines for educational planners and opportunities for infusion in such courses as science, social studies, mathematics, health, home economics and agriculture.

In *Freshwater Resources,* Skofteland (1995) takes up such topics as water resources in sustainable development, the hydrological cycle, water supply and sanitation water in agriculture, water in industry, hydropower development and dams, inland fisheries, inland navigation, water in recreation, the cleaning of contaminated rivers and lakes, water resources management and legislation, water resources in environmental education, and use of environmental impact assessment as a teaching aid. The 107-page module is addressed primarily to curriculum developers and teachers at seondary school or graduate level, and may also be useful in organizing courses on environmental isusses and as support material in assessments of water resources projects.

The Universe Below: The Secrets of the Deep Sea written by Broad (1997) examines how we are illuminating its dark recesses in a rush of discovery, uncovering hidden worlds of alien creatures, living fossils, lost treasures, precious metals, and perhaps even the place where life itself first arose billions of years ago. US-based Center for Marine Conservation President Roger E. McManus said about Broad's book *The Universe Below,* "William Broad weaves a riveting tale that provides a startling perspective on human existence on our ocean planet. *The Universe Below* is destined to become an immediate classic about the marine environment and its importance to human history and well-being."

6. Role of UNESCO in Promoting Environmental Awareness

The environment has been a close concern of UNESCO since its inception. In 1948, the International Union for the Protection of Nature (now the World Conservation Union—IUCN) was created. In 1960, the Intergovernmental Oceanographic Commission was set up. A Biosphere Conference was held in 1968. The Man and the Biosphere Programme was launched in 1970 on the recommendation of the Biosphere Conference. In 1972 the convention concerning the Protection of the World Cultural and Natural Heritage was established. The International Hydrological Programme was created at a joint UNESCO-WMO conference held in 1974 for the assessment of the International Hydrological Decade. In 1990, the International Decade for Natural Disaster Reduction was launched. In 1992, the Rio Earth Summit was held. The Programme on the Management of Social Transformations was initiated in 1994. In 1995, the International Conference on Biosphere Reserves was organized. The Year of Culture and Health was organized in 1996 and "Health, Culture, Communication, and Environment", one of the major programmes, was adopted by the Intergovernmental Committee for the Decade for Cultural Development. As of 1997, 337 Biosphere Reserves, located in 83 different countries, have met the required criteria for this designation laid down within UNESCO's "Man and the Biosphere" Programme. A new interdisciplinary project in UNESCO's Medium Term Strategy for 1996–2001 on "Cities: Management of Social Transformations and the Environment" and a new interagency initiative entitled Climatic Agenda was undertaken by intergovernmental organizations in cooperation with UNESCO.

7. IAEWP's Role in the Cause of Better Environment for Peace

The International Association of Educators for World Peace (IAEWP), since its inception in 1969, has been conscientizing the people of different nations of the world towards conservation of nature and protection of environment through its various chapters in 104 countries by organizing a variety of environmental programmes suited to the local needs and requirements.

This year, in 1997, the 25 anniversary of the United Nations Environment Programme (UNEP) and UN World Environment Day on the theme "For Life On Earth", the *World Peace Painting Contest,* which was developed under the auspices of the International Association of Educators for World Peace (IAEWP), and stimulated by Mr. Lee Jon Young, UN Plenipotientiary Envoy and National Chancellor of South Korea of the same organization, took place at Seoul in the Republic of Korea on 18th June.

The founder of IAEWP and its Executive Vice-President Prof. Dr. Charles Mercieca, summarizing the World Peace Painting Contest event, says that this Peace Contest has been established to preserve and promote the natural beauty of our planet and its environment, to stimulate love and appreciation for the natural art work of mother nature herself as revealed in the beauty of mountains, rivers, lakes, oceans, valleys, trees, bushes and flowers ... and to preserve our earth's rich resources through the retention of pure air and water as well as the continued protection of a healthy global environment.

Besides this, IAEWP organized the International Eurasian Congress at Karadeniz Technical University, Giresun in *Turkey* on the theme: *Environment and Peace* and also on the various sub-themes of the main topic, from 2 to 9 August 1997.

Here is not the end of the activities of IAEWP towards education for environment and peace, but from here we will go with more inspiration to work for a healthy environment for sustainable peace through awakening the people towards environment and peace.

Conclusions: Ecological Literacy for All for Peace

Education for Environment and Peace is essential for better human life and the survival of mankind. But we are ignorant about nature. We are all ecologically illiterate. This is the reason that a few affluent people develop and many poor sustain. And there is danger for both. Therefore, we have to act properly and equitably so that the development of all may be confidently sustained indefinitely. And for this, environmental awareness is a necessity for all, hence, ecological literacy is a must.

Thus we have to create a *Culture of Environment* through the medium

of proper knowledge of ecology which is the base of a *Culture of Peace.* The creation of a Culture of Environment is complementary to the existing Culture of Science. The understanding of merely science has helped us to understand the nature which is separate from us, and we can dominate it and exploit it for immediate gains, and we acted upon this knowledge by mining the resources, drawing down aquifers and cutting down forests. The results are that these things are reduced from nature or the destruction of "natural resources" which adversely affect the lives on the planet especially the very survival of human beings. Therefore, we need immediate knowledge about land, food, air, water and wildlife. This is why a renowned Professor of Environmental Studies at Oberlin College, Orr says, "What is missing in the liberal arts curriculum is not computers, but food; not science, but water; it's not economics, but wildlife" (Orr, 1997, pp. D–F). All these: food, water and wildlife represent nature, the environment. In fact, when we think of "environment" we think of peace, which enables us to protect nature, and assures the very survival of mankind i.e. peace.

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